The International Precipitation Working Group (IPWG)

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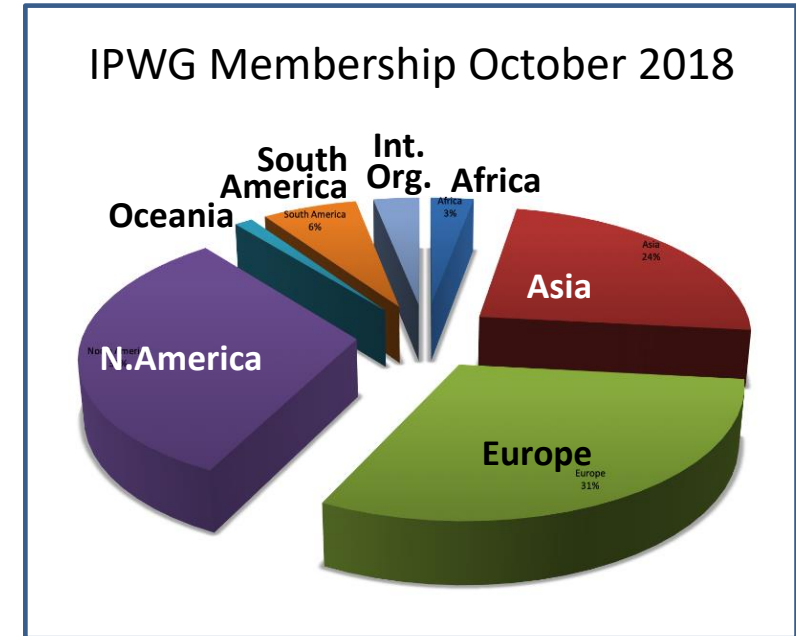
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http://ipwg.isac.cnr.it/

CGMS
Coordination Group for
Meteorological Satellites

IPWG
International Precipitation
Working Group

What is IPWG?

- IPWG was established in 2001 as a permanent Working Group of the Coordination Group for Meteorological Satellites ([CGMS](#)), the group for global coordination between meteorological satellite operators and user communities such as the World Meteorological Organization ([WMO](#)) and IOC-UNESCO.

- Focused on operational and research satellite based quantitative precipitation measurement issues and challenges.

- Provides a forum for operational and research users of satellite precipitation measurements to exchange information.

- IPWG fosters:

  – Development of better measurements and improvement of their utilization;

  – Improvement of scientific understanding;

  – Development of international partnerships.

IPWG Members

US
JP
IT
DE
FR
KR
BR

IPWG membership reached ~500

IPWG Membership October 2018

Oceania
South America
Int. Org.
Africa
Asia
N.America
Europe

IPWG Meetings

- Under the lead of the two Co-Chairs, the IPWG organizes Workshops, co-sponsored by CGMS and WMO, approximately every two years.

- The Workshops promote the exchange of scientific and operational information between the producers of precipitation measurements, the research community, and the user community.

- Working groups around topics like validation, research, applications, data assimilation, scattering.

- IPWG-9 (2018)

  - Co-Chairs: Z. Haddad and D.-B. Shin

  - Yonsei University, Seoul, South Korea

  - 102 participants

  - Training courses

  - 5 working groups

During COVID-19 times…

Several online sessions have been organized around topics of interest in place of the in-person meeting:

➢ <u>On the future of the Passive Microwave Constellation</u>

- June 2020, **120** remote participants from **20** different countries
- Goals:
  - To provide an update to the IPWG community on several space programs relevant for precipitation estimation
  - To provide a forum of discussion to collect information on the future needs of the community for precipitation observations from space

➢ <u>On validation activities</u>

- November 2020, **87** remote participants from **28** different countries
- Goals:
  - To provide an update to the IPWG community on ongoing satellite precipitation validation efforts;
  - To provide a forum of discussion to collect information on the future needs of the community for validating precipitation observations from space.
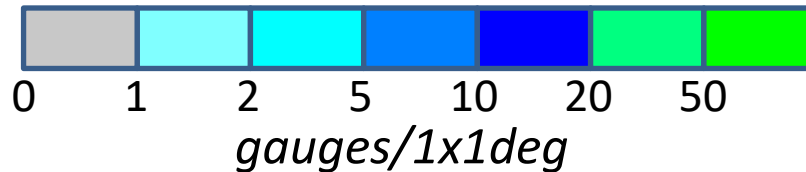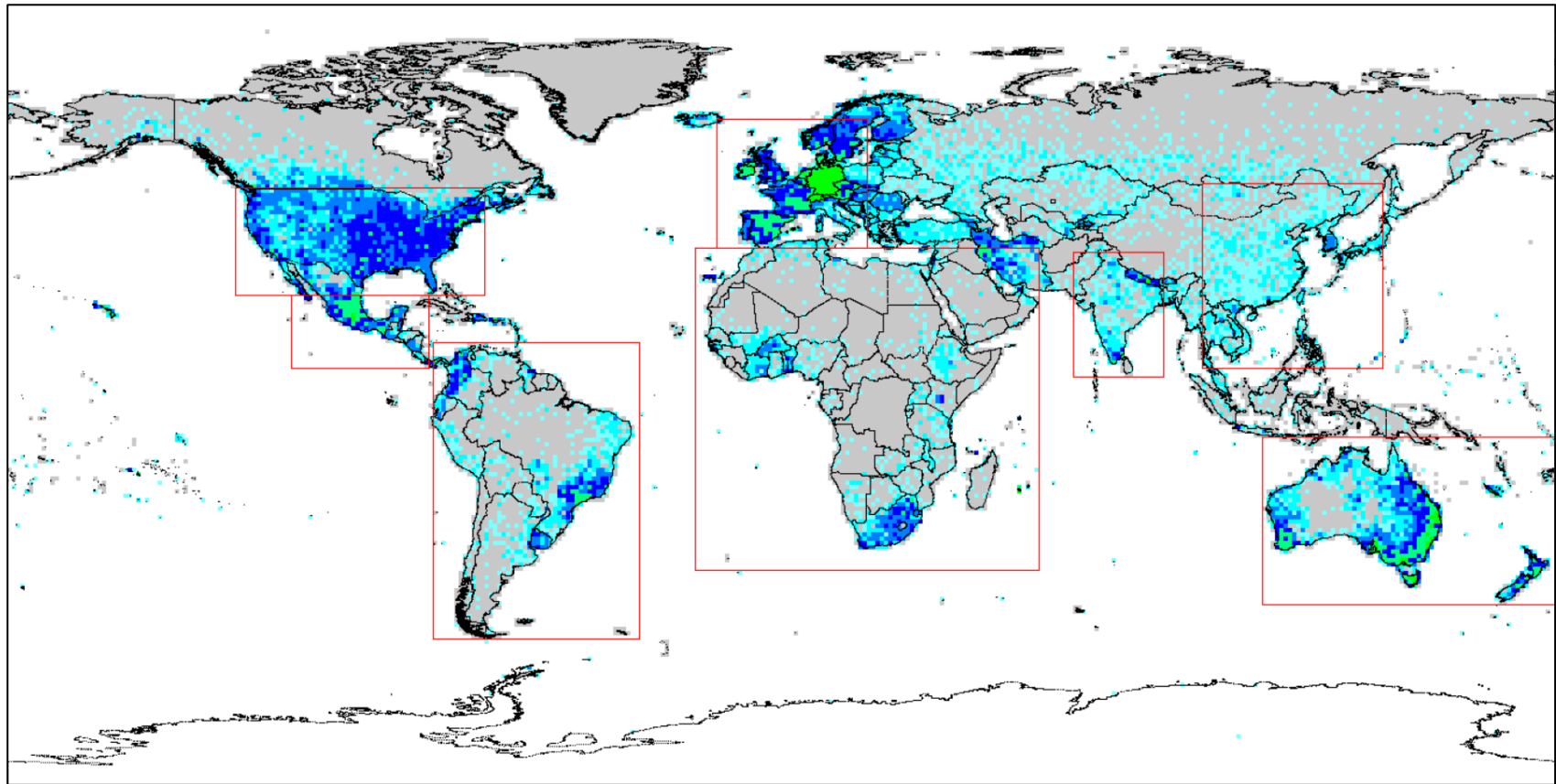
During COVID-19 times…

Next online session:

➢ <u>The IPWG Virtual Session of the Data Assimilation Working Group</u>

- October, 19 2021

- Agenda and zoom link:
  <u>http://ipwg.isac.cnr.it/online/IPWG_DAWG_Flier_Oct2021.pdf</u>

- Goals:

  - Review areas of data assimilation (DA) and numerical weather prediction (NWP) relevant to precipitation observations and precipitation forecasting.
  - The last hour will be a virtual discussion session of the IPWG DA working group, but all IPWG members are welcome.

Science Highlight: Validation

GPCC number of gauges & analysis regions

Courtesy of Chris Kidd

gauges/1x1deg

Science Highlight: Validation

Validation data

Precipitation product

Occurrence comparison

Accumulation comparison
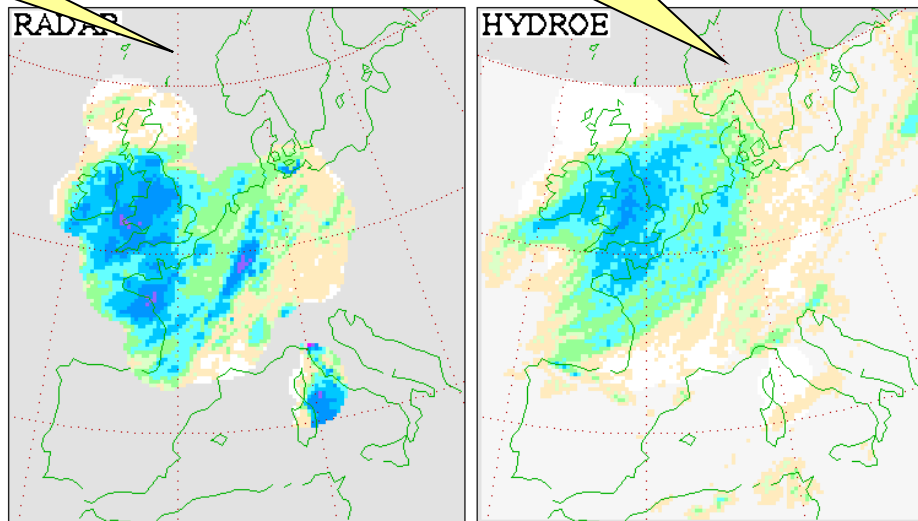
Contingency tables

PoD/FAR/HSS

Descriptive

Scatterplot

Statistics

Cumulative distribution

Courtesy of Chris Kidd
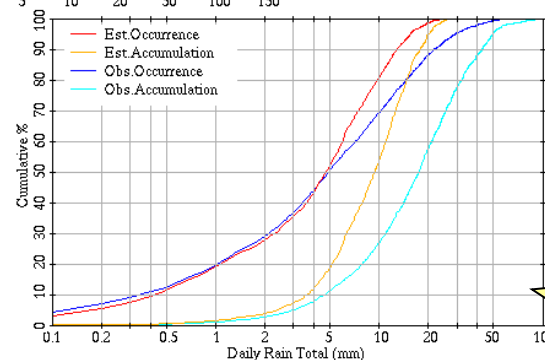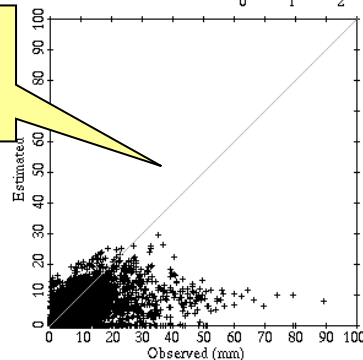
Science Highlight: Validation

New validation site over **South Korea** in addition to the existing ones

IMERG (Late) Estimates for 2020.08.07

KMA Radar Analysis for 2020.08.07

Diff. (IMERG vs. KMA Radar) 2020.08.07
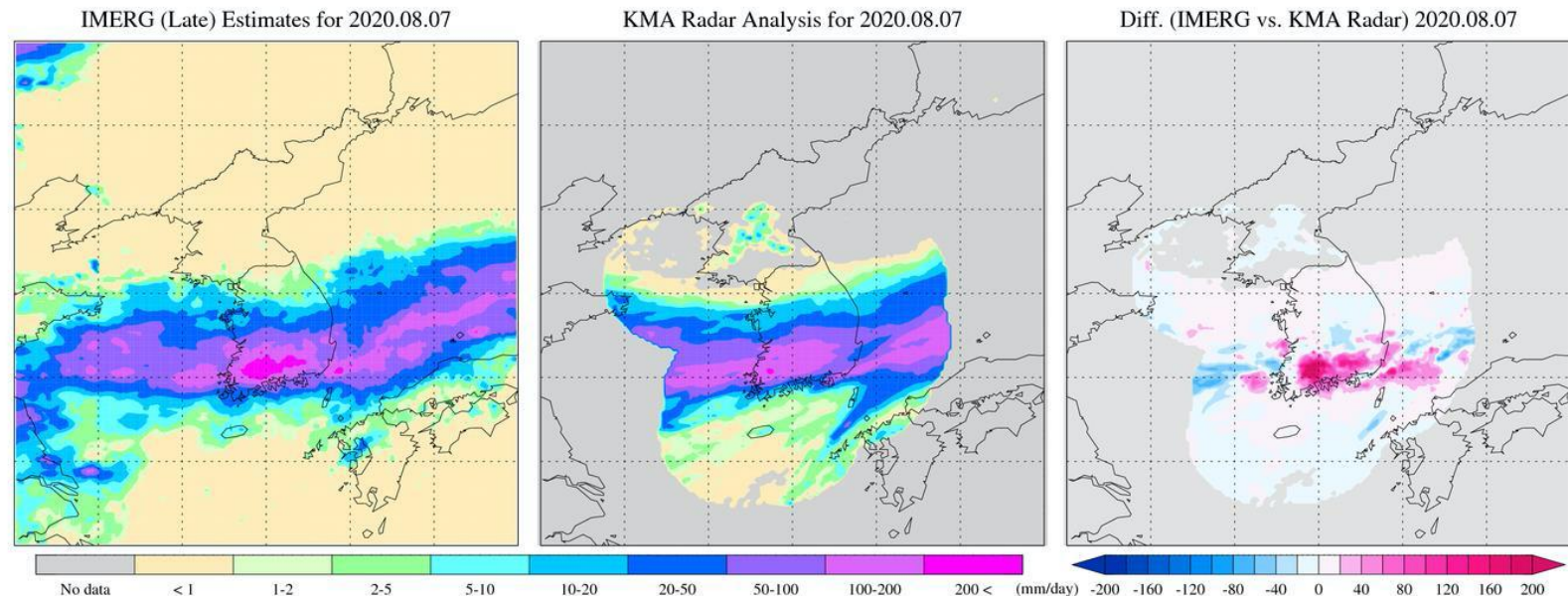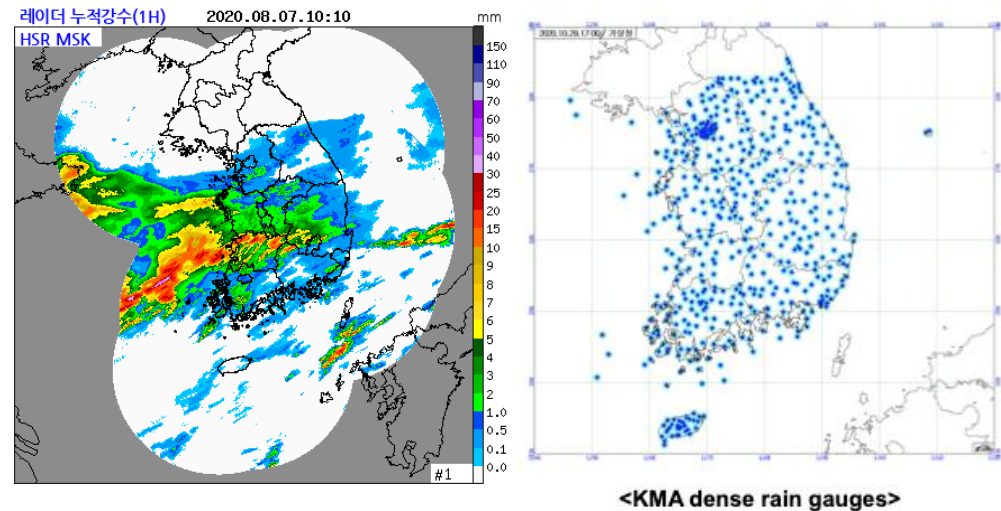
Courtesy of Jun Park

Training

- Training lectures by experts in the area at the bi-annual meeting

1) **Click on Meetings**
2) **Select meeting**
3) **Click on Training lectures**
4) **All the pdfs of lectures are online**

http://ipwg.isac.cnr.it/training.html

Training

- Training lectures by experts in the area at the bi-annual meeting

- Distance Learning Course on Thermal and Microwave Remote Sensing: "Application for Water Vapour, Cloud and Precipitation", September 2020

  – organized by the WMO Regional Training Center of Teheran, Iran

  – 76 participants, from various countries including Iran, Peru, India, Pakistan, Argentina, Myanmar, Iraq, Quatar and Russia.

- **Virtual Laboratory for Training and Education in Satellite Meteorology (VLab)**, a global network of specialized training centers and meteorological satellite operators working together to improve the utilization of data and products from meteorological and environmental satellites
  https://www.wmo-sat.info/vlab/

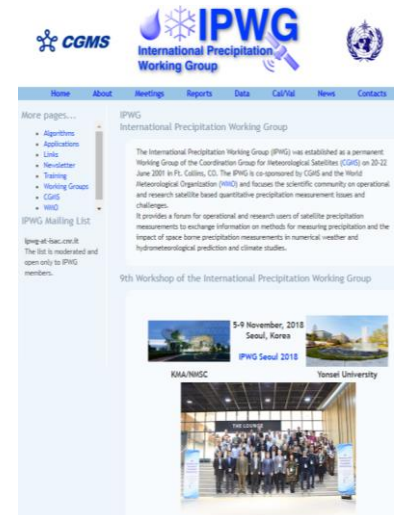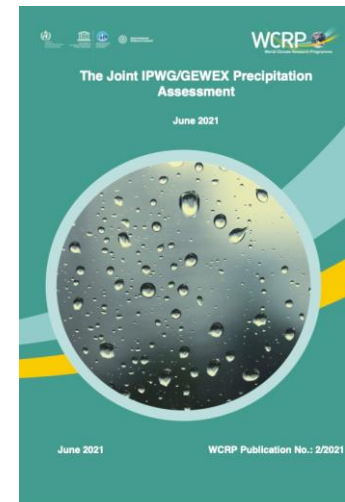 http://ipwg.isac.cnr.it/training.html

Facilitating the choice of one dataset

- Introduction to Global Precipitation Algorithms and Data Sets

- Tables of all the datasets available (update by G. Huffman ongoing)

http://ipwg.isac.cnr.it/data/datasets.html

Scientific Outreach

- IPWG Special Issues in Scientific Journals (e.g., QJRMS, APJAS)

- "The Future of the Global Satellite Precipitation Constellation" has been published on the *Bulletin of the American Meteorological Society (BAMS)*, C. Kidd, G. Huffman, V. Maggioni, P. Chambon, R. Oki.

- "Satellite Precipitation Measurement", V. Levizzani, C. Kidd, D. Kirschbaum, C. Kummerow, K. Nakamura, F. J. Turk, Eds., Springer, 2020

- The Joint IPWG/GEWEX Precipitation Assessment, doi:10.13021/gewex.precip

- IPWG Report on Space Radar Applications

http://ipwg.isac.cnr.it/

IPWG10 Meeting

10TH WORKSHOP OF THE INTERNATIONAL
PRECIPITATION WORKING GROUP (IPWG)
AND 6TH INTERNATIONAL WORKSHOP ON
SPACE-BASED SNOWFALL MEASUREMENT (IWSSM)

1-5 J... 2020, Fort Collins, Colorado, USA

⇒ Joint meeting with the IWSSM community

- June 2022
- Host: Cooperative Institute for Research in the Atmosphere, Colorado State University, Fort Collins, CO
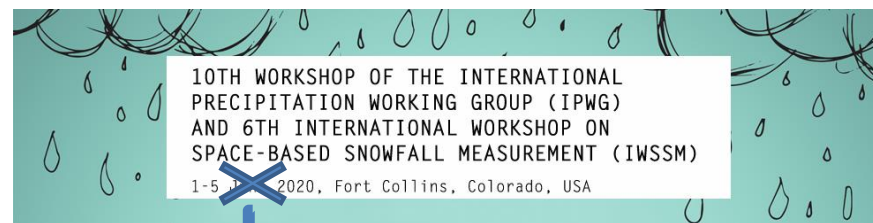
⇒ Joint Science Program committee:

- Viviana Maggioni, Philippe Chambon, Ralf Bennartz, Stefan Kneifel, Huan Meng, Chris Kummerow, Ralph Ferraro, Ziad Haddad, Dong-Bin Shin

⇒ The abstract submission will open in December 2021

⇒ Sessions dedicated to training, organized together with the VLab (plenary session, working groups + dedicated interactive session of training)

If you want to be involved in IPWG and receive updates on meetings and trainings,
sign up for our mailing list by filling in the membership questionnaire (http://ipwg.isac.cnr.it/contacts.html) and emailing it to both Co-Chairs.

Thank you for your attention!

Questions?